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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,561	02/08/2002	Klaus Hartig	44046.203.180.2	9865

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MINNEAPOLIS, MN 55402

EXAMINER
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CANFIELD, ROBERT

ART UNIT	PAPER NUMBER
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3635

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/071,561	<b>Applicant(s)</b> HARTIG ET AL.	
	<b>Examiner</b> Robert J. Canfield	<b>Art Unit</b> 3635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 12,14,15,18-25 and 45-54 is/are pending in the application.
- 4a) Of the above claim(s) 21-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12,14,15,18-20 and 45-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 August 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/29/05.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/11/05 has been entered. Claims 12, 14, 15, 18-25 and 45-54 are pending with claims 21-25 being withdrawn from consideration for being directed towards a non-elected invention. Claims 1-11, 13, 16, 17 and 26-44 have been canceled.

2. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 12, 14, 15 and 45-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiel (5,873,203) in view of Cathers (4,587,769).

In regard to claim 12, Thiel discloses a multiple pane insulating glass unit 20 comprising two spaced apart panes 22, 24 and a spacer 38 joining confronting, inner peripheral surfaces of the panes, the spacer and the confronting surfaces of the panes together defining a between-pane space, at least one of the panes having an outer surface bearing a functional coating 50 or 52 (column 6, lines 4 and 5). Thiel does not specifically disclose that said outer surface has a peripheral region that is substantially free of the functional coating. Cathers teaches that it is known to remove coatings from glass sheets where adhesives or sealants are applied in order to provide direct contact with the glass to prevent a reaction with the film, column 1, lines 26-34, and column 3, lines 56-67. It would have been obvious to one having ordinary skill in the art at the time the invention was made to remove the coating from the outer surface peripheral edge of Thiel's glass sheets, because when the glass unit is placed in a frame, it will be able to be adhered to said window frame around the coating free peripheral edge portion. Therefore, one will not have to worry about a reaction taking place between the adhesive and the coating as discussed by Cathers.

Thiel further teaches that said coating could be a low emissivity coating, column 6, line 9. Therefore, since Thiel discloses coatings 42, 44, 50 and 52 on the inner surfaces, the low- emissivity coating is on the inner surface. Further, the examiner would like to point out that the applicant even states that "low-emissivity coatings are well known in the present art," page 1, line 13.

Finally, Thiel in view of Cathers disclose that said coated inner surface has a peripheral region that is substantially free of said low-emissivity coating, figures 2-6.

In regard to claim 15, Thiel in view of Cathers disclose the basic claimed invention, wherein said coating is an active photocatalytic coating comprising titanium oxide (a non-silver based coating), abstract and column 11, lines 19-26. The examiner would like to point out that although Thiel does not specifically refer to his coating as an active coating," his coating has the same features as applicant's coating. Therefore, they are both active coatings.

In regard to claims 45 and 54, Thiel in view of Cathers disclose the basic claimed invention except for specifically disclosing that said photocatalytic coating has a thickness of about 500 Angstroms or less. However, it has been held that where the general conditions of a claim are disclosed in the prior art discovering the optimum or workable ranges involves only routine skill in the art. Therefore, to make the coating of Thiel's window within the above range would have been obvious to one having ordinary skill in the art at the time the invention was made since the applicant has not disclosed that said thickness is critical to the claimed invention.

In regard to claims 46-49, Thiel in view of Cathers discloses the claimed invention, wherein said coating-free peripheral region on coated outer surface extends a distance inwardly from an edge of the pane that bears said functional coating, said distance being defined as an edge-deletion width, the edge-deletion width being a predetermined width that is uniform along all sides of said coated outer surface. Thiel and Cathers do not specifically disclose that said width is less than about 1 inch or  $\frac{1}{2}$

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inch. However, it has been held that where the general conditions of a claim are disclosed in the prior art discovering the optimum or workable ranges involves only routine skill in the art. Therefore, to make the edge deletion width of Thiel's window within the above range would have been obvious to one having ordinary skill in the art at the time the invention was made since the applicant has not disclosed that said width is critical to the claimed invention.

In regard to claim 50, Thiel in view of Cathers do not specifically disclose that each pane is a soda-lime glass substrate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a soda-lime glass substrate for the panes, because soda-lime glass is a known glass in the window art as admitted on page 8 of applicant's specification. Therefore, to select a known glass for a window would be within the general skill of a worker in the window art.

In regard to claim 51, Thiel in view of Cathers disclose the basic claimed invention except for specifically disclosing the use of a sputtered coating. However, Thiel does teach the use of a wide variety of coatings applied to windows. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place a known coating on a window to produce the desired effect. Furtehr, the method of application does not have to be met to meet the product claim.

In regard to claim 52, Thiel in view of Cathers disclose the basic claimed invention, wherein the functional coating is a hydrophilic coating.

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5. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiel (5,873,203) in view of Cathers (4,587,769) and further Bobel (2,723,427).

In regard to claim 18, Thiel in view of Cathers disclose the basic claimed invention except for specifically disclosing a frame, wherein at least one edge region of the insulating glass unit is received, wherein a bead of glazing compound is disposed between a mounting surface of the frame and said coating-free peripheral region of the insulating glass unit. Bobel teaches that it is known to place a window unit comprising two panes of glass spaced by a spacer in a window frame and to apply a bead of glazing 39 between the frame and the window unit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to place Thiel's window unit in Bobel's frame, because by having the window unit in the frame, it can be mounted in the opening of a building to provide light into the building.

In regard to claims 19 and 20, Thiel in view of Cathers and Bobel disclose the basic claimed invention except for specifically disclosing that said glazing compound comprises an organic material. Thiel teaches the use of polyisobutylene adhesive/sealant. Said adhesive/sealant comprises at least one organic compound, for example water. Said adhesive/sealant will also provide an excellent seal against water.

6. Applicant's arguments filed 07/11/05 have been fully considered but they are not persuasive.

The applicant argues that Thiel and Cathers do not disclose that it is known to remove a coating from both the outside and inside surfaces of a piece of glass used in a

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window construction. Applicant argues that there is disclosure or suggestion of removing any type of film from an exterior surface of a pane of glass. The applicant states that it would not be obvious to flip Cathers' glass over and remove the coating from the other side of the glass because it could damage the coating on the other portion of the glass. The examiner would like to point out that he is not relying on how Cathers removes the coating, but why he removes the coating. Cathers clearly states that the coating is removed so that the sealant contacts the glass and not the coating. Therefore, the examiner believes that one having ordinary skill in the art would be capable of applying this teaching to any glass surface having a coating that is to be adhered to another surface, i.e. such as a frame. Thus, the examiner is taking the position, based on Cathers' teaching, that it would have been obvious to remove the coating from the outside face of Thiel's glass pane so that the window unit could be adhered to a frame as is conventionally done in the window art.

One having ordinary skill in the art would be capable of taking the teachings of Thiel and Cathers to produce applicant's claimed device.

7. The examiner acknowledges receipt of the IDS filed 09/29/05. An initialed copy of the 1449 form is attached.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.



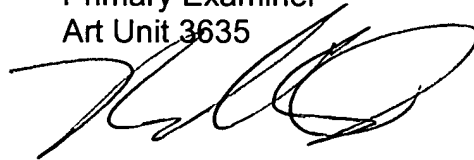
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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Canfield whose telephone number is 571-272-6840. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Friedman can be reached on 571-272-6842. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert J Canfield  
Primary Examiner  
Art Unit 3635



01/17/06